CLAIMS

1. Bacteria concentrate characterised in that the concentrate is liquid and in that the bacteria are adapted, viable and at a concentration between 5.10^{10} and 5.10^{11} ufc/ml, said adapted bacteria being more resistant to various stresses, in particular associated with various physicochemical stresses.

2. Concentrate according to claim 1, characterised in that the bacteria are lactic bacteria, in particular bacteria of the *Lactobacillus spp.*, *Bifid bacterium spp.*, *Streptococcus spp.* and *Lactococcus spp.* genera.

3. Concentrate according to any one of the previous claims, characterised in that the adapted bacteria have at least one of the following characteristics when they are added to a food product:

i) a survival rate above 80 % after 14 days in a food product at a temperature between 4 °C and 45 °C, with said food product having a pH between 3 and 7, or

ii) a survival rate above 60 % and advantageously above 80 % after 28 days in a food product at a temperature between 4 °C and 45 °C, with said food product having a pH between 3 and 7.

4. Concentrate according to claim 3, characterised in that the bacteria have both characteristics i) and ii).

5. Concentrate according to either one of claims 3 or 4, characterised in that the food product is a dairy product and/or a drink.

6. Concentrate according to any one of the previous claims, characterised in that the bacteria are viable for a period of between 4 and 6 weeks.

7. Concentrate according to any one of the previous claims, characterised in that it is capable of being obtained by the method including the successive steps of propagation of the bacteria in a culture medium, adaptation of the bacteria, washing of the culture medium containing the adapted bacteria by tangential microfiltration, and concentration of bacteria in the washed medium by tangential microfiltration.

8. Concentrate according to any one of the previous claims, characterised in that the adaptation of the bacteria is determined by measuring parameters of the bacteria culture medium and/or parameters of the bacteria.

9. Concentrate according to claim 8, characterised in that the parameters of the culture medium are the pH, the osmotic pressure and/or the temperature.

10. Concentrate according to claim 9, characterised in that parameter of the culture medium is the pH and the adaptation step is performed by reducing the pH by natural acidification.

11. Concentrate according to claims 1 to 10, characterised in that the bacteria are adapted by a tangential microfiltration method.

12. Concentrate according to any one of claims 8 to 11, characterised in that the parameter of the bacteria is the size thereof.

13. Concentrate according to claim 12, characterised in that the distribution of lengths of each bacterium of said concentrate are primarily between 0.1 and 10 micrometers, and advantageously between 0.5 and 5 micrometers.

14. Concentrate according to any one of the previous claims, characterised in that its pH is between 3 and 6.

15. Concentrate according to any one of claims 1 to 14, characterised in that it is preserved at a temperature between -50 °C and 4 °C after packaging.

16. Concentrate according to claim 15, characterised in that it is reheated to a temperature between 25 °C and 45 °C, and advantageously between 35 °C and 39 °C, by appropriate means before being used.

17. Use of the concentrate according to any one of claims 1 to 16 as a food additive.

18. Use of the concentrate according to any one of claims 1 to 16 at a temperature between 25 °C and 45 °C, and advantageously between 35 °C and 39 °C.

19. Container in the form of a flexible, hermetically sealed and sterile bag containing the concentrate according to any one of claims 1 to 16.

20. Food product to which a substance is added, characterised in that the food additive used is a liquid concentrate of adapted and viable bacteria according to any one of claims 1 to 16.

21. Food product to which a substance is added according to claim 20, characterised in that it is a dairy product and/or a drink.

22. Method for producing a food product to which a substance is added according to any one of claims 20 to 21, characterised in that the liquid concentrate of adapted and viable bacteria is added to the food product at the end of the production line and advantageously before packaging of the food product.

23. Method for producing a food product to which a substance is added according to claim 22, characterised in that the liquid concentrate of adapted and viable

bacteria is added to the food product in the line by pumping.